

## Complete Summary

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### GUIDELINE TITLE

Angina pectoris.

### BIBLIOGRAPHIC SOURCE(S)

Angina pectoris. Philadelphia (PA): Intracorp; 2004. Various p.

### GUIDELINE STATUS

This is the current release of the guideline.

All Intracorp guidelines are reviewed annually and updated as necessary, but no less frequently than every 2 years. This guideline is effective from January 1, 2004 to January 1, 2006.

## COMPLETE SUMMARY CONTENT

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## SCOPE

### DISEASE/CONDITION(S)

Angina pectoris, including

- Stable angina
- Unstable angina
- Prinzmetal's variant angina

### GUIDELINE CATEGORY

Diagnosis  
 Evaluation

Management  
Treatment

#### CLINICAL SPECIALTY

Cardiology  
Emergency Medicine  
Family Practice  
Internal Medicine  
Thoracic Surgery

#### INTENDED USERS

Allied Health Personnel  
Health Care Providers  
Health Plans  
Hospitals  
Managed Care Organizations  
Utilization Management

#### GUIDELINE OBJECTIVE(S)

To present recommendations for the diagnosis, treatment, and management of angina pectoris that will assist medical management leaders to make appropriate benefit coverage determinations

#### TARGET POPULATION

Individuals with angina pectoris

#### INTERVENTIONS AND PRACTICES CONSIDERED

##### Diagnosis/Evaluation

1. Physical examination and assessment of signs and symptoms
2. Diagnostic tests:
  - Electrocardiogram (ECG)
  - ECG with thallium
  - Echocardiogram (ECHO)
  - Cardiac catheterization

##### Treatment/Management

1. Medical and behavioral therapy
  - Nitrates
  - Treatment of hypercholesterolemia (exercise, low-fat diet, medication)
  - Smoking cessation
  - Aspirin
  - Beta-blockers
  - Calcium channel blockers
2. Invasive therapies

- Percutaneous transluminal coronary angioplasty (PTCA)
- Atherectomy
- Stent placement
- Coronary artery bypass grafting (CABG)

#### MAJOR OUTCOMES CONSIDERED

- Treatment efficacy
  - Symptoms
  - Survival
  - Incidence of reblockage
  - Risk of myocardial infarction
  - Incidence of repeat coronary revascularization or other treatment
- Side effects of treatment

### METHODOLOGY

#### METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)  
 Hand-searches of Published Literature (Secondary Sources)  
 Searches of Electronic Databases

#### DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Searches were performed of the following resources: reviews by independent medical technology assessment vendors (such as the Cochrane Library, HAYES); PubMed; MD Consult; the Centers for Disease Control and Prevention (CDC); the U.S. Food and Drug Administration (FDA); professional society position statements and recommended guidelines; peer reviewed medical and technology publications and journals; medical journals by specialty; National Library of Medicine; Agency for Healthcare Research and Quality; Centers for Medicare and Medicaid Services; and Federal and State Jurisdictional mandates.

#### NUMBER OF SOURCE DOCUMENTS

Not stated

#### METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Not Given)

#### RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not stated

#### METHODS USED TO ANALYZE THE EVIDENCE

Review

## DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

## METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus (Delphi)

## DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

A draft Clinical Resource Tool (CRT or guideline) is prepared by a primary researcher and presented to the Medical Technology Assessment Committee or the Intracorp Guideline Quality Committee, dependent upon guideline product type.

The Medical Technology Assessment Committee is the governing body for the assessment of emerging and evolving technology. This Committee is comprised of a Medical Technology Assessment Medical Director, the Benefit and Coverage Medical Director, CIGNA Pharmacy, physicians from across the enterprise, the Clinical Resource Unit staff, Legal Department, Operations, and Quality. The Intracorp Guideline Quality Committee is similarly staffed by Senior and Associate Disability Medical Directors.

Revisions are suggested and considered. A vote is taken for acceptance or denial of the CRT.

## RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

## COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

## METHOD OF GUIDELINE VALIDATION

Comparison with Guidelines from Other Groups  
Internal Peer Review

## DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

## RECOMMENDATIONS

### MAJOR RECOMMENDATIONS

Diagnostic Confirmation

## Subjective Findings

- Stable angina (AP)
  - Chest pain/discomfort with exertion, emotional stress, or meals
  - Neck, dental, back, arm pain (atypical)
  - Symptoms relieved by rest and/or antianginal medications
- Unstable angina (USA)
  - Precordial chest pain occurring at rest or in crescendo pattern
  - Pain is unrelieved effectively by nitrates
  - Change in a previously stable anginal pattern
  - May be accompanied by
    - Nausea
    - Jaw or neck pain
    - Arm pain
    - Sweating
    - Palpitations
    - Shortness of breath
    - Lightheadedness
    - Anxiety

## Objective Findings

- Diaphoresis
- Tachycardia
- Cardiac auscultation is typically normal, but may be remarkable for nonspecific findings such as an S4, especially in hypertensive patients; flow murmurs, or even pathologic murmurs, may be heard in patients with coexisting valvular disease.
- Drop in blood pressure
- Slight S-T segment elevation on electrocardiogram (ECG)

## Diagnostic Tests

- ECG - for symptoms consistent with ischemia or prior infarct and to confirm diagnosis of angina
- ECG - with thallium; stress testing for the presence of a reversible defect is an important predictor of future cardiac events
- Echocardiogram (ECHO) - to observe dynamic chamber wall motion
  - Vasodilator perfusion study (persantine)
  - Pharmacologic stress (dobutamine)
- Cardiac catheterization (see the Intracorp guideline Cardiac Catheterization)
  - Abnormal stenoses on cardiac catheterization
  - Coronary angiography provides data for determination of anti-ischemic therapy.

## Differential Diagnosis

- Reflux esophagitis
- Anxiety states (See the Intracorp guideline Generalized Anxiety Disorder)
- Mitral valve prolapse (See the Intracorp guidelines Mitral Stenosis and Mitral Regurgitation)

- Dissecting aneurysm (See the Intracorp guidelines Abdominal and Thoracic Aortic Aneurysm)
- Pulmonary embolism (See the Intracorp guideline Pulmonary Embolism/Infarction)
- Acute pericarditis (See the Intracorp guideline Pericarditis)
- Pneumothorax
- Mediastinal emphysema
- Acute pancreatitis (see the Intracorp guideline Pancreatitis)
- Acute cholecystitis
- Peptic disease (see the Intracorp guideline Peptic Ulcer Disease)
- Perforated ulcer
- Pleuritis
- Rib fracture (see the Intracorp guideline Rib Fractures)
- Gastroesophageal reflux disease (see the Intracorp guideline Gastroesophageal Reflux Disease [GERD])

### Treatment Options

- Medical management to ameliorate symptoms and improve exercise tolerance; prognosis with medical management is similar to surgery unless there is left main or triple vessel disease with a ventricular ejection fraction <50 %.
  - Nitrates remain the first-line therapy for angina and are available in various preparations, including fast acting sublingual nitroglycerin; the use of longer acting preparations may lead to toxic levels.
  - Treat hypercholesterolemia (increased exercise, low-fat diet, medication).
  - Smoking cessation
  - Aspirin: a widely used anti-inflammatory and antiplatelet agent that has become the standard of care for patients with coronary artery disease (CAD); its use may reduce the risk of myocardial infarction by 40% in patients with preexisting disease.
  - Beta-blockers are safe and widely used antianginals with an excellent track record in the management of patients with CAD. Unfortunately, they fail in 20 % of CAD cases, and can be contraindicated in patients with chronic obstructive pulmonary disease (COPD), diabetes, or asthma comorbidities. They are frequently associated with undesirable side-effects such as depression, impotence or libido changes, fatigue, and exercise intolerance
  - Calcium channel blockers are well-tolerated and effective antianginals, but a recent controversy regarding the potential risk of increased mortality with their use in patients suffering from CAD has yet to be resolved.
- Invasive therapies
  - Percutaneous transluminal coronary angioplasty (PTCA): PTCA is a technique that employs heart catheterization to guide balloon dilatation of a stenosed coronary artery, thereby restoring blood flow to a region of ischemic myocardium; PTCA improves symptoms but is not always able to prolong survival; restenosis of the affected vessels is a major problem inherent to PTCA occurring in 20 to 25% of patients (see the Intracorp guideline PTCA for indications).
  - Atherectomy

- Stent placement
  - Drug-eluting coronary artery stents are likely to have a substantial impact on the incidence of reblockage in patients who undergo angioplasty; preliminary study results indicate that, compared with an uncoated metal stent, the sirolimus-eluting stent significantly reduces the likelihood of reblockage of the artery, consequently reduces the need for repeat coronary revascularization or other treatment, and improves event-free survival. These positive findings persisted for up to 1 to 2 years, and clinical trials with longer follow up are ongoing. Early studies suggest that paclitaxel-eluting stents confer similar benefits for treating coronary artery disease.
- Coronary artery bypass grafting (CABG): surgery is considered optimal therapy for left main artery disease or triple vessel disease with left ventricular dysfunction and has dramatic benefits in diabetic patients with CAD (see the Intracorp guideline Coronary Artery Bypass Grafting)

#### Duration of Medical Treatment

- Medical - optimal: 90 day(s); maximal: 450 day(s)

Additional provider information regarding primary care visit schedules, referral options, and specialty care are provided in the original guideline document.

The original guideline document also provides a list of red flags that may affect disability duration, and return to work goals, including

- Resolving chest pain
- Resolving symptoms of coronary heart failure
- Resolving arrhythmia
- After hospitalization for PTCA

#### CLINICAL ALGORITHM(S)

None provided

### EVIDENCE SUPPORTING THE RECOMMENDATIONS

#### TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

### BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

#### POTENTIAL BENEFITS

Overall Benefits

Appropriate diagnosis, treatment, and management of angina pectoris (AP) that assist medical management leaders in making appropriate benefit coverage determinations

#### Specific Benefits

- The use of aspirin may reduce the risk of myocardial infarction by 40% in patients with preexisting disease.
- Preliminary study results indicate that, compared with an uncoated metal stent, the sirolimus-eluting stent significantly reduces the likelihood of reblockage of the artery, consequently reduces the need for repeat coronary revascularization or other treatment, and improves event-free survival. These positive findings persisted for up to 1 to 2 years, and clinical trials with longer follow up are ongoing. Early studies suggest that paclitaxel-eluting stents confer similar benefits for treating coronary artery disease.
- Coronary artery bypass grafting is associated with dramatic benefits in diabetic patients with coronary artery disease.

#### POTENTIAL HARMS

- Beta-blockers are frequently associated with undesirable side effects such as depression, impotence or libido changes, fatigue, and exercise intolerance.
- Calcium channel blockers are well-tolerated and effective antianginals, but a recent controversy regarding the potential risk of increased mortality with their use in patients suffering from coronary artery disease has yet to be resolved.
- Percutaneous transluminal coronary angioplasty (PTCA) improves symptoms but is not always able to prolong survival; restenosis of the affected vessels is a major problem inherent to PTCA occurring in 20 to 25% of patients

### CONTRAINDICATIONS

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Beta-blockers can be contraindicated in patients with coronary artery disease with chronic obstructive pulmonary disease, diabetes, or asthma comorbidities.

### IMPLEMENTATION OF THE GUIDELINE

#### DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

### INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

#### IOM CARE NEED

Getting Better  
Living with Illness



## IOM DOMAIN

Effectiveness

### IDENTIFYING INFORMATION AND AVAILABILITY

#### BIBLIOGRAPHIC SOURCE(S)

Angina pectoris. Philadelphia (PA): Intracorp; 2004. Various p.

#### ADAPTATION

Not applicable: The guideline was not adapted from another source.

#### DATE RELEASED

1997 (revised 2004)

#### GUIDELINE DEVELOPER(S)

Intracorp - Public For Profit Organization

#### SOURCE(S) OF FUNDING

Intracorp

#### GUIDELINE COMMITTEE

CIGNA Clinical Resources Unit (CRU)  
Intracorp Disability Clinical Advisory Team (DCAT)  
Medical Technology Assessment Committee (MTAC)  
Intracorp Guideline Quality Committee

#### COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Not stated

#### FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

#### GUIDELINE STATUS

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## GUIDELINE AVAILABILITY

Electronic copies: Intracorp guidelines are available for a licensing fee via a password protected, secure Web site at [www.intracorp.com](http://www.intracorp.com).

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## AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Policies and procedures. Medical Technology Assessment Committee Review Process. Philadelphia (PA): Intracorp; 2004. 4 p.

Licensing information and pricing: Available from Intracorp, 1601 Chestnut Street, TL-09C, Philadelphia, PA 19192; e-mail: [lbowman@mail.intracorp.com](mailto:lbowman@mail.intracorp.com).

## PATIENT RESOURCES

None available

## NGC STATUS

This NGC summary was completed by ECRI on November 22, 2004. The information was verified by the guideline developer on December 8, 2004.

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Date Modified: 9/25/2006

